

ABSTRACT

The optical modulator may include a strained layer of SiGe to confine carriers in a quantum well. The strained layer of SiGe may be doped with arsenic to provide electrons. The optical modulator may receive an optical signal and modulate the received signal by altering the absorption coefficient of the strained layer of SiGe responsive to an electrical signal. The optical modulator device device may be suitable for use in chip-to-chip and on-chip interconnections.